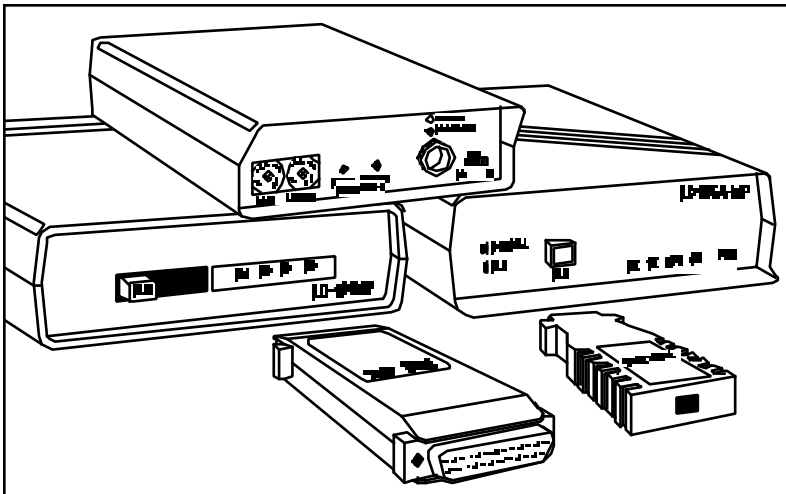
ASYNCHRONOUS LINE DRIVERS



Send your async data up to 6.4km from your computer equipment—without the expense of a modem.

Key Features

- ***Send async data across short- and medium-range distances.***
- ***Use existing in-house twisted-pair wiring to transmit data.***
- ***Choose from a variety of data rates.***
- ***Point-to-point or multipoint applications, 2- or 4-wire half- or full-duplex operations supported.***
- ***Compact, nonpowered line drivers offer easy installation.***

You need a line driver if you need to transmit data from your computing equipment further than the 15.2-m RS-232 limit, but do not need a modem (which can transmit data worldwide). Line drivers can exchange data within a building or across town. They propel data up to 6.4 km—some transmit data up to 11.2 km under the right conditions.

1. Powered vs. nonpowered

First, determine whether you need a non-powered or powered line driver.

A nonpowered line driver plugs into the connector at the communications port of your DTE and derives its power from the port's interface (RS-232/CCITT V.24) via one or more of the connector's pins.

- Confirm that the pins needed to run the line driver are supported.
- Determine the gender (male/female) of your computer's comm-port connector and select a nonpowered line driver with the proper connector gender.

Choose a powered line driver if:

- Your computer can't support nonpowered units.
- You prefer rackmount equipment.

Powered line drivers require a standard AC current to operate, and they're available in standalone and rackmount models.

When choosing between these models, consider the available installation space, the total units needed, and your existing equipment.

2. Point-to-point vs. multipoint

Are you sending data in a point-to-point or multipoint installation?

Does your system or software support multipoint installations?

A multipoint installation links many terminals, each with its own line driver, to a computer via one master line driver. Multipoint line drivers are used in high-speed and polling applications. They can also be used in point-to-point installations, so you can upgrade to multipoint environments in the future.

3. Wiring: in-house or leased

Point-to-point network: Use your in-house wiring for on-site applications, or a telephone line known as a Local Area Data Circuit (LADC) to send data off-site. In-house wiring will be either 2- or 4-wire twisted-pair cable that exists in your building or that you will install. Some line drivers work with 2-wire TP cable, others with 4-wire TP cable, and still

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others with either of these cables. An LADC is a 4-wire TP cable leased by your phone company. This private circuit is unconditioned and unloaded, and provides full-duplex operation.

4. Speed limits

How fast will your data travel using async line drivers? Review your computer's limitations (can it support high speeds?) and your software applications. Other considerations:

- How far must your data travel?
- How much room for error can you tolerate in data exchanges?
- What wire gauge(s) will be used?
- How many splices will exist in the wire?

Technically Speaking

Choose a line driver to fit your needs:

Short-Haul Modems (2-wire) (nonpowered, point-to-point) (ME738/ME739)

- Get fast, efficient data exchanges via full-duplex operation without the higher cost of 4-wire cable operation.
- "Plus" models have automatic local loopback circuitry for detecting line faults.
- "Plus" models also offer transformer isolation to protect your DTEs from different ground potentials (a problem if your lines run outdoors or underground).

Microdriver 9 (nonpowered, point-to-point) (ME790 series)

- Saves space—plugs directly into your PC's DB9 serial port.
- Sends data up to 4 km at 9600 bps or 1.9 km at 19.2 kbps, using 26-AWG gauge wire.
- Models are available with RJ-11, RJ-45, or 5-screw terminal-block connectors.

Short-Haul Modem-B Async (powered, point-to-point) (ME790 series) (ME800)

- Ideal for most any point-to-point, 4-wire, full-duplex application.
- Equipped with a balanced loop interface and optical isolation circuitry, providing protection from differences in ground potential between areas.
- Local analog loopback circuitry lets you check the operation of both your local and remote units.
- Speeds up to 19.2 kbps.

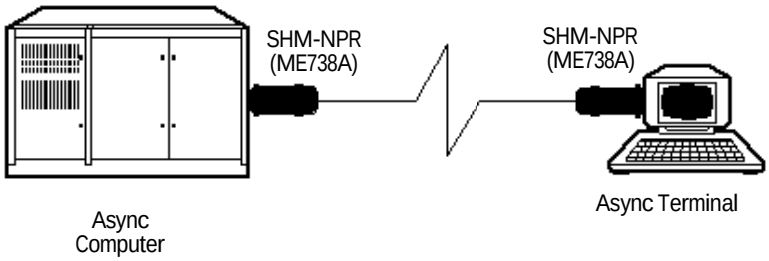
RS-232/RS-485 Multipoint Line Driver (LD485A-MP) (powered, point-to-point or multipoint) (ME836AC-R2)

- Provides high-speed service (64 kbps) for large multipoint installations (up to 64 drops).
- Special circuitry lets the LD-485-MP work with any DTE that can be polled, regardless of the DTE's RTS support; you get total compatibility with your DTE hardware.
- A user-selectable port-timeout feature automatically disables a port once it finishes transmission, so a single port will not monopolise your network.
- Operates in 2- wire half-duplex or 4-wire full-duplex mode.

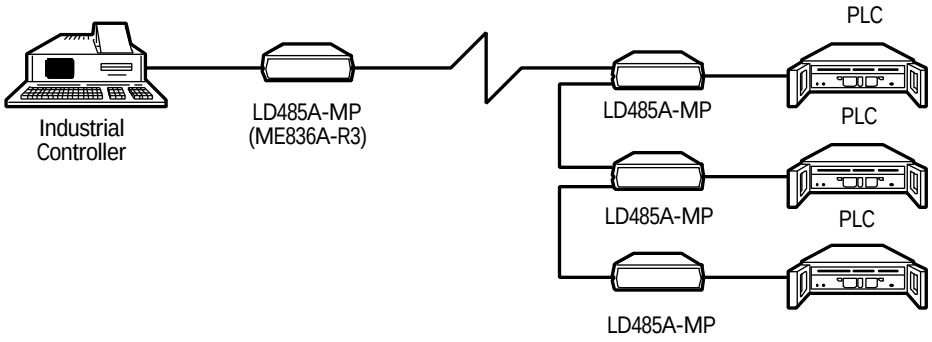
High-Speed Short Haul Modem-B Async (ME802AE) (powered, point-to-point)

- An asynchronous full-duplex, 4-wire line driver/receiver which allows two RS-232 devices to communicate at distances up to 6.4km or at data rates up to 115.2 kbps.
- Uses two unshielded twisted pairs.
- Includes optical isolation to protect against surge damage.
- Switch-selectable for DTE or DCE equipment. No special cross-pinned cables are needed; it works with the modular RJ cable that's already installed in your building.

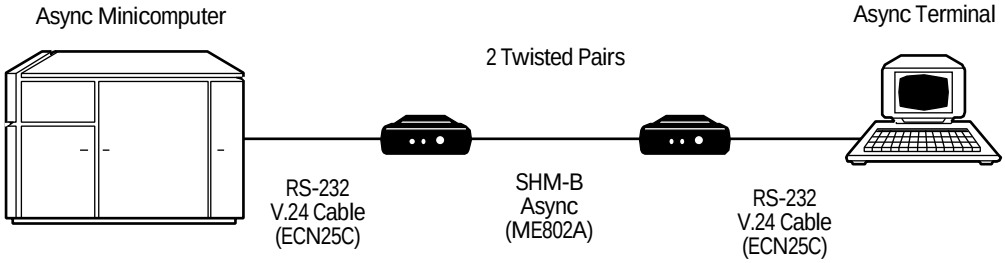
Use a nonpowered or powered line driver in a variety of applications, including 2- or 4-wire, half- or full-duplex, and point-to-point or multipoint.



A typical application using the ME738A, which is a nonpowered line driver operating in 2-wire, point-to-point mode.



A typical application using the ME836A-R3, which is a powered line driver operating in 4-wire, multipoint mode.



A typical application using the High-Speed Short Haul Modem Async, ideal for anyone sending asynchronous data point to point at speeds up to 115.2 kbps.

Quick Reference Guide

FEATURES/DESCRIPTION	POWERED/ NON-PWRD	MULTIPOINT	2-WIRE	4-WIRE	FULL-DUPLEX	HALF-DUPLEX	TO 19.2 KBPS	TO 64 KBPS	TO 115.2 KBPS	POWER	SIZE
ME738A-M ME738A-F	NP		X		X		X			RS-232 interface, Pin 2, 4, 20, 6 VDCmin.	10.9H x 5.3W x 2.3Dcm 0.3 kg
ME739A-F-R2 ME739A-M-R2	NP		X		X		X			RS-232 interface, Pin 2, 4, 20, 6 VDCmin.	10.9H x 5.3W x 2.3Dcm 0.3 kg
ME790A (M, F), ME791A (M, F), ME792A (MSP, FSP), ME793A(MSP, FSP), ME794A (MSP, FSP) NOTE: MSPand FSP models have surge protection.	NP			X	X	X	X			RS-232 interface, DCEmode: Pins 3, 4, 7	6.8H x 5.3W x 1.8Dcm <0.1 kg
ME800A-E ME805C-R2	P			X	X		X			230 VAC, 50 Hz	3.8H x 10.9Wx11.5Dcm 0.6 kg
ME836AE-R2, ME836C-R2	P	X	X	X	X	X	X	X		230 VAC, 50 Hz	4.6H x 14W x 21.6D cm 0.9 kg
ME802AE	P			X	X		X	X	X	230 VAC, 50 Hz	3.8Hx10.9W x 11.4Dcm 0.6 kg

Transmission Distances——Kilometres

NOTE: Actual distances will vary depending on the specific operating environment. Table is based on the use of 26 AWG cable (except for the ME800A-E, which is based on the use of 24 AWG). Using shielded cable reduces distances by 66%.

PRODUCT/ SPEED	ME738A-M ME738A-F	ME739A-F-R2 ME739A-M-R2	ME790A THRU ME794A	ME800A-E	ME836AE-R2	ME802AE
2400 bps	3.2	0.6	7.9	6.4	4.8	6.4
4800 bps	2.7	0.6	6.0	4.8	3.7	5.6
9600 bps	2.1	0.6	4.0	3.2	2.7	4.0
19.2 kbps	—	0.6	1.9	1.6	1.9	3.2
56 kbps						2.7
115.2 kbps						2.4

NOTE: If you do not find a line driver here to fit your application, we have many more models available.

Specifications

All Models:

Protocol — Asynchronous

Short-Haul Modems (2-Wire) (ME738A, ME739A-R2)

Maximum Distance —
ME738A: 4.8 km
ME739A-R2: 0.6 km

Speed — ME738A: Up to 9600 bps;
ME739A: Up to 19.2 kbps

Operation — 2-wire full-duplex, point-to-point

Interface — RS-232/V.24

Connectors — (1) DB25 female, (1) 2-screw terminal

Power — From the interface

Size — 10.9H x 2.3W x 5.3D cm

Weight — 0.3 kg

Microdriver 9 (ME790 series)

Distance — 19.2 km at 1200 bps (24 AWG wire); 6 km at 19.2 kbps

Speed — Up to 19.2 kbps

Operation — 4-wire half- or full-duplex, point-to-point

Interface — RS-232/V.24

Connectors —
ME790A-M, ME792A-MSP: (1) DB9 male, (1) RJ-11 female;
ME790A-F, ME792A-FSP: (1) DB9 female, (1) RJ-11 female;
ME791A-M, ME793A-MSP: (1) DB9 male, (1) 5-screw terminal block;
ME791A-F, ME793A-FSM: (1) DB9 female, (1) 5-screw terminal block;
ME794A-M, ME794A-MSP: (1) DB9 male, (1) RJ-45 female;
ME794A-F, ME794A-FSP: (1) DB9 female, (1) RJ-45 female

Power — From interface: DCE mode: Pins 3, 4, 7

Size — 6.8H x 5.3W x 1.8D cm

Weight — <0.1 kg

Short-Haul Modem-B Async (ME800A-E)

Diagnostics — Local loopback

Maximum Distance — 6.4 km

Speed —
ME800AE : Up to 19.2 kbps;
ME802AE : Up to 115.2 kbps

Operation — 4-wire, full-duplex, point-to-point

Interface — RS-232/V.24

Connectors — (1) DB25 female, (1) 4-screw terminal block

Power — 230 VAC, 50 Hz, External adaptor

Size -3.8H x 10.9W x 11.5D cm

Weight — 0.6 kg

RS-232/RS-485 Multipoint Line Driver (LD485A-MP) (ME836AE-R2)

Maximum Distance — 6.4 km

Speed — Up to 64 kbps

Operation — 4-wire full-duplex, 2-wire half-duplex, point-to-point or multipoint

Interface — RS-232/V.24; RS-485

Connectors — (1) DB25 female, (1) 4-screw terminal block

Power — 230 VAC, 50Hz, external adaptor

Size — 4.6H x 14W x 21.6D cm

Weight — 0.9 kg

High-Speed Short Haul Modem Async (SHM-B) (ME802AE)

Protocol — Asynchronous

Speed — Up to 115.2 kbps

Operation — 4-wire, full-duplex, point-to-point

Diagnostics — Local loopback

Interface — RS-232, CCITT V.24

Connections — (1) DB25 female, (1) 4-screw terminal block

Power — 230 VAC, 50 Hz

Size — 3.8H x 10.9W x 11.4D cm

Weight —0.6 kg

Ordering Information

ITEM	CODE
Short-Haul Modems (2-wire)	
SHM-NPR, Male	ME738A-M
SHM-NPR, Female	ME738A-F
SHM-NPR Plus	
Male	ME739A-M-R2
Female	ME739A-F-R2
Microdriver 9 RJ-11	
Male	ME790A-M
Female	ME790A-F
Microdriver 9 RJ-11 with Surge Protection	
Male	ME792A-MSP
Female	ME792A-FSP
Microdriver 9 5-screw terminal block	
Male	ME791A-M
Female	ME791A-F
Microdriver 9 5-screw terminal block with Surge Protection	
Male	ME793A-MSP
Female	ME793A-FSP
Microdriver 9 RJ-45	
Male	ME794A-M
Female	ME794A-F
Microdriver 9 RJ-45 with Surge Protection	
Male	ME794A-MSP
Female	ME794A-FSP
Short-Haul Modem-B Async	
Standalone	ME800A-E
Rackmount Card with cables	ME805C-R2
RS-232/RS-485 Multipoint Line Driver (LD485A-MP)	
Standalone	ME836AE-R2
Rackmount Card	ME836C-R2
Multi-Function Rack (16-Card)	RM005
High Speed SHM-B Async	
Standalone	ME802AE
RS-232CCable	ECN25C